

### REMARKS

In reply to the action mailed June 4, 2003, Applicant requests reconsideration and allowance in view of the following remarks. Claims 1-19 and 21-31 are pending with claims 1, 16-19, 23, 24 and 31 being independent.

The Examiner has rejected claims 1-19 and 21-31 as obvious over U.S. Patent No. 6,149,669 (Li) in view of U.S. Patent No. 6,066,160 (Colvin). The Examiner's rejection of claim 1 states:

Colvin et al. also discloses that the means of restricting a flexible member may be incorporated into anchor bodies used in the bone (col. 4, ll. 10-18). This is advantageous because it eliminates the extra step of tying knots in the ends of the flexible member. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the flexible member aperture of the Li with the restrictor of the aperture of Colvin et al. The restrictor of the aperture of Colvin et al. holds the flexible member and comprises a means of restricting the flexible member, allowing the flexible member to be held without ties or knots at the ends. This means of restriction creates versatility for terminating sutures and securing tissue anchors in place.

Applicant submits that one of ordinary skill in the art would have no motivation to modify Li in the manner that the Examiner is suggesting.

Li is directed to a surgical fastener method that eliminates the need for the surgeon to have to thread sutures through a ligament being secured to bone and tie the sutures together. *See*, e.g. Li at col. 1, lines 13-40. To this end, Li describes providing suture anchors coupled by a fixed length of suture. *See* e.g., Li at col. 5, lines 7-19. A first anchor with attached suture is passed through the ligament and secured in a bore hole in the bone. *See*, e.g., Li at col. 5, lines 38-47 and Fig. 5. A second anchor, which is also attached to the suture, is passed through the ligament and into a second bore hole in the bone. *See*, e.g., Li at col. 5, lines 56-58 and Fig. 5. When the required tension in the suture is achieved, the second anchor is deployed in place in the second bore hole such that the suture spans between the anchors across the ligament to secure the ligament to the bone. *See*, e.g., Li at col. 5, line 58 to col. 6, line 6 and Figs. 5 and 5A. Thus, in Li, the surgeon does not need to thread suture through the ligament or tie any knots after the

anchors are inserted into the bore holes, and the tension in the suture is determined by the depth at which the second anchor is deployed.

As the Examiner concedes regarding claim 1, Li does not disclose a generally stationary restrictor to selectively restrict movement of a flexible member coupled thereto.

Colvin is directed to a suture securing apparatus having an aperture that permits suture to move in one direction but opposes movement of the suture in the opposite direction. *See, e.g.,* Colvin at col. 8, lines 58-64. Colvin's device allows the surgeon to adjust the length of suture once the device is positioned within the patient without tying knots. While Colvin states that the invention can be incorporated into prosthetics such as orthopedic implants, Colvin does not state that the invention can be incorporated into bone anchors. In particular, Colvin is directed to securing prosthetics in place using suture (*see, e.g.,* Colvin at col. 1, lines 5-25, col. 3, line 66 to col. 4, line 37, and col. 12, lines 65-67), not to anchor bodies or, in particular, to a bone anchor that is configured to be retained within bone to which a flexible member is coupled, as recited in claim 1.

One skilled in the art presented with Li and Colvin would have no motivation to use Colvin's aperture in the anchor of Li because the object of Li is to have a fixed length of suture that in use advantageously requires no manipulation of the suture. In the method of Li, the surgeon simply places the anchors with the pre-attached fixed length of suture through the ligament and into the bone holes, and adjusts the depth of the anchors to achieve the desired tension in the suture. Modification of Li's anchor in the manner suggested by the Examiner would destroy the advantage of Li's method, i.e., a method that requires no manipulation of the suture. Colvin, on the other hand, addresses the difficulty of tying knots in the close confines of the surgical site by including an aperture in the device that permits movement of the suture in one direction; but Li neither ties knots in suture at the surgical site nor requires movement of the suture at the surgical site. According to Li, knots are tied to set the length of the suture between the anchors prior to use of the anchor. Because Li uses another approach for tensioning the suture - adjusting the depth of the anchors - there is no motivation or suggestion for incorporating Colvin's aperture in Li's anchor other than by using hindsight.

In the Response to Arguments, the Examiner states:

Regarding the combination of Li and Colvin et al., the invention of Li uses knots to tie the ends of the suture that travel through the apertures (col. 4, ll. 2-7). Hence, modifying of the aperture of Li with the means of restriction of Colvin et al. is advantageous, since the physician can eliminate the extra step of tying knots. Adding the means of restriction of Colvin et al. would not destroy the invention of Li because the length of suture in the device of Li can still be fixed.

The Examiner is apparently taking the position that one skilled in the art would use Colvin's aperture to fix the length of suture in Li's anchor before positioning Li's anchor in the patient instead of using knots as described by Li. The Examiner is impermissibly employing hindsight, using applicant's claims as a template for the combination. Colvin addresses the difficulty in tying knots when the suture securing apparatus is at the surgical site. *See, e.g.,* Colvin at col. 1, lines 51-64. Neither reference suggests that there would be any advantage to Colvin's aperture versus knots when the knots are tied prior to placement of a device at a surgical site. Furthermore, there is no reason why "versatility for terminating sutures and securing tissue anchors in place," as suggested by the Examiner, would be advantageous in the anchor of Li. Thus, there is no motivation or suggestion in the references for the proposed combination.

Likewise, regarding the rejection of the remaining independent claims, the Examiner has again taken the position that it would be obvious to modify the anchor of Li with the aperture of Colvin such that suture can be held without the extra step of tying knots. As discussed above, there is no motivation or suggestion in the references for the proposed combination.

Furthermore, applicant does not concede to the Examiner's characterization of the references. In particular, regarding claim 26, the Examiner states "If both of the apertures (element 63) in Fig. 5 are modified to contain the means of restriction of Colvin et al., then the flexible member will be restricted when pulled in an opposite direction against the permissible direction. Claim 26 relates to a bone anchor including two restrictors and recites that the restrictors are oriented such that passage of the flexible member through both restrictors is permitted when one end region of the flexible member is pulled, and passage of the flexible member through both restrictors is restricted when an opposite end region of the flexible member

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is pulled. This is not the case with the orientation of Colvin's apertures. Rather, in Colvin, one end of the suture is tensioned to move the suture through one of the apertures and the other end of the suture is tensioned to move the suture through the second aperture. *See, e.g., Colvin at col. 9, lines 13-26.*

Because there is no suggestion or motivation for modifying Li as proposed by the Examiner, applicant respectfully submits that the references do not support a *prima facie* case of obviousness under the provisions of 35 U.S.C. §103. Therefore, applicant submits that for at least the reasons discussed above, claims 1-19 and 21-31 are allowable over Li in view Colvin.

Enclosed is a check for the Notice of Appeal. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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